

Recovery Plan Action Status

Plan Name: Recovery Plan for the Rare Aquatic Species of the Muddy River Ecosystem

Plan Status: Final Revision 1

Plan Date: 16-May-96

Lead Agency: USFWS

Lead Office: Nevada Fish And Wildlife Office

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Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Moapa dace (Moapa coriacea)	1	11	Develop (FY 1996) and implement habitat protection agreements	Ongoing Current	FY 2006		Nevada Department of Wildlife, U.S. Fish and Wildlife Service	Management: Habitat Maintenance and Manipulation, Management: Planning	Internal Technical Assistance	Conservation measures for habitat protection were committed to in FY 2006 under the auspices of section 7 consultation, including a Recovery Implementation Program which will be developed in FY 2007 and beyond. These efforts are ongoing in 2009 led by a Biological Advisory Committee that reports to an Executive Committee representing the Memorandum of Agreement (Section 7 Recovery/Mitigation) signatories.
Moapa dace (Moapa coriacea)	1	12	Minimize nonnative fish impacts	Ongoing Current	Prior to FY 1995		Nevada Department of Wildlife, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service	Management: Predator and Competitor Control, Research: Predation	Internal Field Assistance, Internal Technical Assistance	Several fish barriers to isolate exotic infestations have been planned and implemented. Habitat modifications in several reaches (Plummer, Pederson, Aparcar) have reversed populations hence impacts of exotic fish on native fish (see Scopettone et. al 2005 for example from Ash Meadows).

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Moapa dace (Moapa coriacea)	2	13	Develop (FY 1996) and implement habitat restoration / management plans	Ongoing Current	FY 1995 - FY 1999		Nevada Department of Wildlife, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service	Management: Habitat Maintenance and Manipulation, Management: Planning	Contract, Internal Field Assistance, Internal Technical Assistance, Species Expert	Major restoration projects have been completed successfully on the lower Pederson channel and upper Apcar channel. Both areas are supporting dace where none have existed for years. A major effort is in progress on South Fork channel, involving removal of tilapia. More dispersed efforts have also succeeded in improving habitat conditions for dace throughout many of the reaches, including in particular the Plummer spring system, which now supports nearly half of the global Moapa dace population.
Moapa dace (Moapa coriacea)	2	2	Monitor Moapa dace populations	Ongoing Current	Prior to FY 1995		Nevada Department of Wildlife, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service	Research: Population Surveys	Internal Field Assistance, Internal Technical Assistance	Ongoing, multi-agency surveys are conducted on an annual basis and have been increased to a semi-annual basis for the past two years (2008 & 2009) and looking forward.
Moapa dace (Moapa coriacea)	3	3	Determine extent of parasitism in Moapa dace population	Not Started			U.S. Geological Survey, Biological Resources Division	Research: Disease	Internal Field Assistance, Internal Technical Assistance	

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Moapa dace (Moapa coriacea)	1	4	Provide public information and education	Ongoing Current	FY 2006		Nevada Department of Wildlife, U.S. Fish and Wildlife Service	Other: Information and Education	Contract, Internal Technical Assistance	A refuge brochure was designed in FY 2005 and published in FY 2006. The Refuge is open to the public on weekends to inform and educate visitors about the Refuge, the Moapa dace, and the Muddy River ecosystem generally.